CLAIMS

What is claimed is:

1. An inductive device comprising:

a core configured so as to be a closed loop; and

at least one coil around said core, said coil formed from a first material having a first cross-section with an aspect ratio of a first dimension to a second adjacent dimension, said first dimension being longer than said second dimension, wherein said coil is positioned around said core such that said first dimension is essentially normal to said core.

2. The inductive device of Claim 1, wherein said core is formed from a second material and includes a core section formed from a third material.

3. The inductive device of Claim 2, wherein said second and third material are the same.

4. The inductive device of Claim 2, wherein said third material is dissimilar to said second material.

5. The inductive device of Claim 4, wherein said third material is air.

6. The inductive device of Claim 2, wherein said core section is configured so as to be a wedge.

7. The inductive device of Claim 2, wherein said coil is formed and then slidably placed around said core through an opening formed in said core by removing said core section.

8. The inductive device of Claim 7, wherein said coil is formed around a second device, that is separate from said inductive device, and removed from said second device before being slidably placed around said core.

9. The inductive device of Claim 1, wherein said core is configured into a toroidal shape.

10. The inductive device of Claim 1, wherein said core is configured into a polygon.

11. The inductive device of Claim 10, wherein said polygon has rounded corners.

12. The inductive device of Claim 1, wherein said inductive device is an inductor.

13. The inductive device of Claim 1, wherein said inductive device is a transformer.

14. The inductive device of Claim 1, wherein said core has a second cross-section and said coil is a helix having a third cross-section.

15. The inductive device of Claim 14, wherein said second and third cross-sections are the same.

16. The inductive device of Claim 14, wherein said second and third cross-sections are circular.

17 The inductive device of Claim 1, wherein said first dimension is a maximum characteristic dimension based on the axis of symmetry of said first cross-section.

18. A method for assembling an inductive device comprising a coil formed from a material having a cross-section with an aspect ratio of a first dimension to a second adjacent dimension, said first dimension being longer than said second dimension, and a core configured so as to be a closed loop, said core further including a removable core section, said method comprising the steps of:

removing said core section from said core;

slidably placing said coil around said core, through an opening in said core formed by removing said core section, such that said first dimension is positioned essentially normal to said core; and

replacing said core section into said core.

19. The method of Claim 18 further comprising securing said core section in place using an adhesive.

20. The method of Claim 18, wherein said coil is slidably placed around said core using a separate fixture.

21. A method for assembling an inductive device comprising a coil formed from a material having a cross-section with an aspect ratio of a first dimension to a second adjacent dimension, said first dimension being longer than said second dimension, and a core configured so as to be a closed loop, said core further including a core section that is a gap, said method including the step of slidably placing said coil around said core, through an opening in said core formed by said gap, such that said first dimension is positioned essentially normal to said core.

22. A method for assembling an inductive device comprising a helical coil having a first and a second end, and a core configured so as to be a closed loop, said method comprising the steps of:

engaging the first end of said coil with said core; and

rotating said coil for causing said coil to wind around said core, wherein said coil is rotated until said second end engages said core.

23. The method of Claim 22, wherein the steps of said method are performed manually.

24. The method of Claim 22, wherein the steps of said method are performed as part of an automated process.

25. The method of Claim 24, wherein said second end is formed after said first end is engaged with said core.

26. The method of Claim 22, further comprising the step of guiding said coil around said core using a separate device.

27. The method of Claim 22, wherein said coil is formed from a material having a cross-section with an aspect ratio of a first dimension to a second adjacent dimension, said first dimension being longer than said second dimension and said coil is wound around said core such that said first dimension is essentially normal to said core.

28. The method of Claim 22, wherein said core is configured into a toroidal shape with a predetermined cross-section diameter and said helical coil has a pitch that is at least as long as said diameter.

29. The method of Claim 22, wherein said core is configured into a toroidal shape with a predetermined inner circumference and a predetermined outer circumference, and said coil has a compressed length from said first end to said second end that is substantially the same as said inner circumference.